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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,605

10/18/2005

Ryuji Suzuka

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7590

01/28/2009

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EXAMINER

COLE, ELIZABETH M

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

01/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,605	Applicant(s) SUZUKA ET AL.	
	Examiner Elizabeth M. Cole	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins et al, U.S. Patent No. 5,178,932 with evidence from Steven B. Warner, "Fiber Science", page 60. Perkins discloses a multilayered laminate comprising an inner meltblown layer having a diameter of 0.1-10 micrometers and two outer layer comprising fibers having a diameter in excess of 7 micrometers. The interfaces between the layers significantly intermingled. See abstract. The basis weight for the laminate in the example is 54 grams per square meter which is within the claimed range. The layers are bonded through the application of heat and pressure. Suitable fibers for the layers include polyesters, polyolefins, polyetherester and polyamides. See col. 5, line 65 - col. 6, line 33. The melt blown layer has a basis weight of 14 gsm while the two outer layers have basis weights of 20 gsm each respectively, so the meltblown layer, (i.e., fine fiber layer), has a weight of less than 50% of the fabric weight. Perkins differs from the claimed invention because it does not specifically disclose the claimed bulk density and intrusion index, pressure employed or solution viscosity. However, since Perkins teaches the same types and diameters of fibers in fabrics of the claimed basis weight, and teaches combining the layers through pressure in order to arrive at a laminate where the interfaces are significantly intermingled, it would have been obvious to one of ordinary skill in the art to have selected the processing conditions and

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viscosities through the process of routine experimentation in order to arrive at a fabric having the desired density and intrusion index. With regard to the claimed crystallinity, "Fiber Science" establishes that polyester and nylon (polyamide) generally has a crystallinity of about 40 percent, which is within the claimed range. With regard to the claimed solution relative viscosity, while Perkins does not disclose the claimed solution relative viscosity, since the same fibers having the same size and made of the same polymers having the claimed crystallinity are used, it is reasonable to expect that the fibers would have the claimed solution relative viscosity.

3. Applicant's arguments filed 11/17/08 have been fully considered but they are not persuasive. Applicant argues that the previous action does not address the crystallinity of the fine fibers. It is noted that this limitation was not present in the claims before the instant amendment and therefore could not have been addressed.

4. Applicant argues that Perkins does not teach the claimed crystallinity range. However, as shown by "Fiber Science", nylon and PET (a type of polyester) generally has a crystallinity of 40 percent which is within the claimed range. Applicant argues that there is no reason to expect that the fibers of Perkins would have the claimed solution viscosity since it does not address solution viscosity or crystallinity. However, as set forth above, "Fiber Science" establishes that nylon and PET generally have the claimed crystallinity and therefore it is reasonable to expect that they would have the claimed solution viscosity.

5. Applicant argues that prior art does not address the bulk density and intrusion index and that there is no teaching or suggestion that these are result effective

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variables. However, Perkins does teach intermingling the fiber layers which is a different way of discussing intrusion index. The person of ordinary skill in the art would have been able to select the degree of intermingling of the layers in order to form a composite fabric with the desired integrity, strength, layer differentiation, etc. Further, with regard to the bulk density, Perkins teaches a material which necessarily has a bulk density. The person of ordinary skill in this art would have been able to select a bulk density depending on the desired end use of the product and to have controlled the bulk density through control of the processing of the fabric. Applicant has not set forth any criticality for the claimed bulk density values.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

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The examiner's supervisor Rena Dye may be reached at (571) 272-3186.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794

e.m.c